

MONTHLY TEST, JUNE - 2024

STANDARD - XII

Time : 1.30 Hrs. **COMPUTER SCIENCE**
PART - A

Marks : 50

10 X 1 = 10

I. Choose the best answer:

- The functions which cause side effects to the arguments passed are called
 - Impure functions
 - Partial functions
 - Dynamic functions
 - Pure functions
- Which keyword is required to define a function to be a recursive function?
 - rec
 - recursive
 - void
 - return
- Which of the following are mandatory to write the type annotations in the function definition?
 - { }
 - ()
 - []
 - < >
- Which of the following is a compound structure?
 - Pair
 - Triplet
 - Single
 - Quadrat
- Stack ADT and Queue ADT can be implemented using
 - tuple
 - list
 - dictionary
 - pair
- Which of the following refers to the visibility of variables in one part of a program to another part of the same program?
 - Scope
 - Memory
 - Address
 - Accessibility
- Which of the following members of a class can be handled only from within the class?
 - Public members
 - Protected members
 - Secured members
 - Private members
- In which scope, the inner function can also access the variable of the outer function?
 - Local
 - Global
 - Built-in
 - Enclosed
- A finite set of instructions to accomplish a particular task is
 - Flowchart
 - Algorithm
 - Branching
 - Iteration
- From the following sorting algorithm which algorithm needs the minimum number of swaps?
 - Bubble sort
 - Quick sort
 - Merge sort
 - Selection sort

Part - B

II. Answer any FIVE questions. Question No. 18 is compulsory. $5 \times 2 = 10$

11. Write algorithmic function definition to find the minimum among 3 numbers.
12. What is a subroutine?
13. Differentiate constructors and selectors.
14. What is Mapping?
15. How python represents the private and protected access specifiers?
16. What is Insertion sort?
17. What is an Algorithm?
18. What is a List? Give an example?

Part - C

III. Answer any FIVE questions. Question No. 26 is compulsory. $5 \times 3 = 15$

19. What is the side effect of impure function? Give example.
20. What happens if you modify a variable outside the function? Give example.
21. What are the different ways to access the elements of a list. Give example.
22. Which strategy is used for program designing? Define that strategy.
23. Define Local scope with an example.
24. Why access control is required?
25. Discuss about Algorithmic complexity and its types.
26. What do you understand by Dynamic programming?

Part - D

IV. Answer all the questions: $3 \times 5 = 15$

27. Explain with example pure and impure functions.

(OR)

How will you access the multi-item? Explain with example.

28. Explain the types of scopes for variable of LEGB rule with example.

(OR)

What is Binary search? Discuss with example.

29. Explain with an example interface and implementation.

(OR)

Write any five benefits in using modular programming.

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